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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,075	11/05/2004	Takayuki Nakachi	261302US90PCT	2793
22850 7590 02/03/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER DIEP, NHON THANH				
ART UNIT 2621		PAPER NUMBER		
NOTIFICATION DATE 02/03/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

# Office Action Summary

## Application No.

10/512,075

## Applicant(s)

NAKACHI ET AL.

## Examiner

Nhon T. Diep

## Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 8-12, 20-24 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-12, 20-24 and 34-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/5/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-506)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 10/22/2009 have been fully considered but they are not persuasive.

With regard to the applicants' argument that "Fukuhara describes a general wavelet transform method which splits bands as shown in Figure 3. Further, Fukuhara describes uniform subbands in Figure 5 and paragraph 0026.

However, Fukuhara does not describe or suggest synthesizing the N signals that are decoded to obtain an image of the resolution of N/M times that of the original image, where M and N are integers, and  $1 \leq N < M$  and  $M > 2$ , as is recited in Claim 8.

In other words, Fukuhara does not describe or suggest synthesizing the N signals that are decoded to obtain an image of the resolution of N/M times that of the original image (M and N being integers, and  $1 \leq N < M$  and  $M > 2$ , e.g.  $M = N$  is not included) by extracting the N signals from decomposed signals (decomposed into M uniform subbands) from a low frequency side, as is recited in the claimed invention.

Thus, while Fukuhara describes in Figure 5 that the band can be uniformly split, this disclosure is merely an example of an efficient way to encode/decode to obtain an image of the same resolution as the original image. Nothing in Fukuhara describes synthesizing the N signals that are decoded to obtain an image of the resolution of N/M times that of the original image, where M and N are integers, and  $1 \leq N < M$  and  $M > 2$ .". The examiner respectfully disagrees.

Since Fukuhara discloses the synthesizing the N signals that are decoded to obtain an image of  $1 \text{ over } 2$  to the power of n, it meets the limitation as claimed. For example, when  $N = 1$  and  $M = 4$ , Fukuhara meets the limitation as claimed, which is  $N / M$  and " $1 < \text{or} = N < M$  and  $M > 2$ "; or when  $N = 1$  (or 2) and  $M = 8$  (or 16), Fukuhara meets the limitation as claimed, which is  $N / M$  and " $1 < \text{or} = N < M$  and  $M > 2$ ". It is noted that there are other combination of values of N and M that Fukuhara does not meet; however, Fukuhara does meet the limitations as currently claimed and as explained above.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8-9, 11-12, 20-21, 23-24 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuhara et al (2000-197052 and cited by the applicants).

Fukuhara et al discloses a wavelet coder, its method, decoder and its method comprising the same decoding method of decoding, using a decoding apparatus having a processor, coded data with a resolution of  $N/M$  times ( $M$  and  $N$  are integers, and  $1 < \text{or} = N < M$  and  $M > 2$ ) that of an original image, the decoding method comprising:

a decoding step of receiving the coded data that are encoded by decomposing the original image into  $M$  uniform subbands, extracting  $N$  signals from decomposed

signals from a low frequency side (para. 0021), and decoding, using the decoding apparatus, the N signals by using an entropy decoding method (para. 0012); and

a bandwidth synthesizing step of synthesizing the N signals that are decoded to obtain an image of the resolution of N/M time that of the original image (fig. 14) as specified in claims 8, 12, 20, 24, 28, 30, 34 and 36; the decoding method further comprising an inverse quantization step of inverse-quantizing the signals obtained by the decoding step, wherein signals that are obtained by the inverse quantization step are synthesized in the bandwidth synthesizing step (para. 0012, 0024 and Drawing 14) as specified in claims 9, 21, 29 and 35; and the decoding method further comprising a calculation step of obtaining a resolution of the original image and a predetermined resolution, and calculating the value N suitable for the predetermined resolution by using the resolution of the original image and the decomposition number M (Drawings 3 and 5) as specified in claims 11 and 23.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuhara et al, in view of Koyama et al (US 6,765,510).

As applied to claims 8 and 20 above, it is noted that Fukuhara does not particularly disclose wherein EBCOT used in the still image international standard JPEG

2000 is used as the entropy decoding method in the decoding step, and a uniform decomposing filter bank is used in the bandwidth synthesizing step as specified in claims 10 and 22. Koyama et al teaches "JPEG 2000 uses a coding called "EBCOT (embedded block coding with optimized truncation)" for the entropy coding in order to make the most of the features of the discrete wavelet transform". Since all the claimed elements were known, and the technique to carry out was used in the prior art, and one skill in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results, and, therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fukuhara by using EBCOT for entropy coding as taught by Koyama et al. Doing so would help to improve coding efficiency

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T. Diep whose telephone number is 571-272-7328. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nhon T Diep/  
Primary Examiner, Art Unit 2621